

---

**READ/WRITE HEAD WITH REDUCED POLE TIP PROTRUSION**

---

**ABSTRACT OF THE INVENTION**

A write element for use in a read/write head having an air bearing surface, so as to reduce pole tip protrusion. The write element includes a pole tip region; an insulation layer formed adjacent to the pole tip region; a coil embedded in the insulation layer which contributes to a protrusion force that generates a pole tip protrusion; and a layer of thermally expansive material formed over the insulation layer, and recessed from the air bearing surface, that expands in response to heat absorption, causing a rotational moment of force that counteracts the protrusion force thus reducing the pole tip protrusion.